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REMARKS

Favorable reconsideration of the present application is respectfully requested.

In the Official Action dated December 3, 2003, it was indicated that prior rejections of various claims in view of Nieman et al., and in view of a combination of Nieman and King et al. were being withdrawn. Applicant appreciates that indication, and has herein endeavored to place the application in condition for allowance.

Claims 1-5 and 7 now stand rejected under 35 USC §103(a) as being unpatentable over Applicant's own disclosure, commencing at page 1, line 13, through page 2, line 16. Claims 1-7 have been rejected under 35 USC §103(a), in view of a combination of the teachings of the Nieman patent with applicant's disclosure. Claims 8-15 have been rejected under 35 USC §103(a) in view of Nieman, applicant's disclosure, and the King et al. patent.

The Official Action cites to two passages from applicant's disclosure as being relevant to the grounds for rejection. The first passage, at page 1, lines 13-17, has been quoted in the Official Action as stating that,

it is known in the art to adjust the composition of molten material by introducing a cored wire into the molten material, further disclosing that this cored wire includes a wire core surrounded by a metallic casing.

While the above has been improperly been set forth as a direct quote from the specification (it is not), Applicant acknowledges that the two basic concepts, i.e., the use of introducing a cored wire into a molten material to adjust the composition of the molten material, and that such cored wires included a wire core surrounded by a metallic casing, were known at the time the present invention was made.

The second passage relied upon, appearing at lines 12-15 of page 2 of the application, is quoted in the Official Action as stating that,

[I]t is known to cover the metallic sheath with a wrapping which, being combustible without leaving any harmful residues, momentarily retards the propagation of heat to the core of the cored wire. This combustible wrapping is wound in a helix around the metallic sheath.

With the exception of one minor error (“the metallic sheath” vs. “this metallic sheath”, in the first sentence), this passage was quoted accurately. However, in reviewing the grounds of rejection citing to this passage, Applicant has realized that the passage erroneously states that the construction described “is known”. Indeed, this error can readily be seen when reading the passage in the context of the paragraphs which precede and follow the passage that has been quoted.

This error initially arose in the course of preparing and filing two applications in France that relate to the present invention and application. A first French application, No. 00.08284, filed in June, 2000, upon which the present application claims priority, was directed essentially to the invention set forth in Claims 1-7 herein (and in the French application). That French priority application did not contain this quoted passage.

In this regard, while the present file contains a “Verification of Translation” which states that the translation (which contains the quoted language) is of French Patent Application No. 00.08284, filed June 28, 2000, the Verification should have stated that it was a true and faithful translation of the French language application filed in the U.S. Patent and Trademark Office on March 16, 2001. If it is deemed necessary, Applicant will secure a revised Verification of Translation for the English-language translation filed July 16, 2001, as well as a verified translation of French application No. 00.08284, as filed on June 28, 2000, in France.

Following the filing of the above priority application in France, a second application was prepared and filed in France on March 5, 2001. This second application was based in part on the first application, and was directed principally to the invention as now claimed in Claims 8-10. At the time that this second application was prepared, in order to differentiate between the earlier disclosed invention in FR 00.08284 and the specific embodiments relating to Claims 8-10, the quoted passage including the phrase, "it is known", was introduced into the application.

In then preparing the application that was eventually to be filed in the U.S., Applicant's French representatives modified the claims to include the claims of both French applications, and appended those to the text of the second application filed in France in March of 2001. At that point, the statement at issue, i.e., the statement containing the phrase "it is known" was inadvertently left in the application that was eventually filed in the U.S., even though that which followed was a description of one version of the actual invention. Applicant has corrected the error by deleting the phrase "it is known", and replacing that with the phrase, "[O]ne aspect of the invention is...". This makes the sentence consistent with the portions of the specification preceding and following that sentence.

The sentence/paragraph (p. 2, line 11) immediately preceding the sentence in question states that, "[T]he object of the invention is to eliminate the aforementioned drawbacks." These included the problems associated with explosive reactions possibly occurring in an area very close to the surface of the molten bath, and problems with vaporization of certain additives at the surface of the bath, which procedures a detrimental strong surface reactivity.

The solution to these problems, as clearly stated in the “Summary of the Invention”, immediately following the quoted portion in question, and described as, “[T]he subject of the invention”, comes in the form of

a cored wire comprising a metallic sheath containing an additive and covered by a wrapping 7 which, being combustible without leaving any harmful residues, momentarily retards the propagation of heat to the core of the cored wire.

The amendment to page 2 renders the passage at issue consistent with this stated summary and subject of the invention.

Persons skilled in the art would immediately recognize the error in the specification, in that, among other reasons:

- (1) it is completely incongruous to state that, on the one hand, something is “known”, and in the very next paragraph and in the claims, state that the same “something” is the subject of the invention and is the invention as claimed.
- (2) the specification states that FIG. 1 is, “a cross-section of a cored wire according to the invention” (p. 2, line 27). FIG. 1 shows only a metallic sheath 5 containing an additive 6 and a wrapping 7.
- (3) the specification then states that FIG. 4 shows, “a cross-section of a variant of a cored wire”. That figure illustrates the components identified in (2) above, plus a protective metallic casing.

As a result, the changes made in the specification do not add any “new matter” to the application, and instead simply render the specification internally consistent.

The correction of the obvious error in the specification also obviates all of the grounds for rejection currently presented in the Official Action. It is not, as previously erroneously stated, “known” to cover a metallic sheath with a wrapping

which, being combustible without leaving any harmful residues, momentarily retards the propagation of heat to the core of the cored wire. As such, all grounds of rejection which rely on this erroneous statement, can not stand. As noted previously, each of the existing grounds of rejection relies in whole or in major part, on the erroneous statement. Thus, reconsideration and withdrawal of the above-stated grounds of rejection under 35 USC §103(a) are therefore respectfully requested.

In view of the foregoing, Applicant believes that all claims as currently presented are allowable over the prior art of record, and are, in all other respects, in condition for allowance. Reconsideration and withdrawal of all rejections are respectfully requested. Passage of the application to issue at an early date is earnestly solicited. The Examiner is encouraged to call the undersigned if any issues remain which are possibly susceptible of resolution by telephone interview.

Respectfully,

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Version With Markings to Show Changes Made

molten metal bath causes the cored wire to explode in an area very close to the surface of the bath.

Other additives vaporize very quickly and close to the surface. This produces a strong surface reactivity, which results in an oxidation and/or reinitriding of the bath, splashes of the liquid metal that damage the material, and heavy smoke emanation. Therefore, this introduction operation is much less efficient in the presence of these additives, and the resulting safety conditions are not adapted for industrial utilization.

In an attempt to eliminate this problem, it is known to introduce the cored wire through a tube made of refractory material immersed in the bath. The use of this tube is very difficult and very costly.

The object of the invention is to eliminate the aforementioned drawbacks.

[It is known] One aspect of the invention is to cover this metallic sheath with a wrapping which, being combustible without leaving any harmful residues, momentarily retards the propagation of heat to the core of the cored wire. This combustible wrapping is wound in a helix around the metallic sheath. Unfortunately, the paper wrapping is sometimes observed to deteriorate during handling, i.e., when the wire is wound around the reel or when the wire placed on the reel is unwound in order to be introduced into the bath.

SUMMARY OF THE INVENTION

The subject of the invention is a cored wire comprising a metallic sheath containing an additive and covered by a wrapping 7 which, being combustible without leaving any harmful residues, momentarily retards the propagation of heat to the core of the cored wire.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be better understood with the help of the following description given as a non-limiting example, in reference to the attached drawing, which schematically represents:

- Fig. 1: a cross-section of a cored wire according to the invention,
- Fig. 2: a step in the preparation of the cored wire,
- Fig. 3: an installation using a cored wire,
- Fig. 4: a cross-section of a variant of a cored wire.